9810 North Coast Area Contingency Plan - ACP 1

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9810.1 Introduction

The North Coast Area includes 82 environmentally sensitive sites. Sections 9811.1, 9812.1, 9813.1 and 9814.1 contain the Site Summary sheets which detail the significance of each sensitive site. Many of these sites have individual response strategies that may be considered as guidelines for response when the threat of oiling creates the need to deploy protective measures. In some cases, more than one strategy is included for a given site due to variations in a site's profile from one visit to another.

The response strategies should be taken into consideration when a particular site or group of sites is threatened by a discharge of oil. However, the strategies were developed for conditions existing on the date surveyed, conditions which may or may not be present when an actual response is deemed necessary. The conditions present when a threat of oiling exists (i.e. weather, current, tide, availability of response resources, type of product, biological resources present, type of sediment present, site accessibility, etc.) should dictate the type of response. Furthermore, the strategies presented should be considered a "last line of defense" to prevent oil from entering a specific environmentally sensitive site. Certainly, every effort to contain and recover the discharged oil while it is on the water should be made prior to employing the exclusionary booming measures that many of the strategies call for.

9810.11 General Response Strategies For The North Coast Area

Although each environmentally sensitive site has a unique set of characteristics, the vast majority of North Coast sites fall into three broad categories: Offshore Rocks/Rocky Headlands/Pocket Coves, Tidal Inlets (creeks and rivers), and Beaches. Below are general strategies for these three site categories.

Offshore Rocks/Rocky Headlands/Pocket Coves

Sites of this nature are generally accompanied by high wave energy, which drastically reduces the effectiveness of existing spill response technology. Furthermore, these sites are often very difficult and dangerous to access via land or water due to heavy surf, submerged rocks, sheer cliffs and lack of roads to the area. As a result, response options are very limited, which underscores the importance of recovering the oil on-water if at all possible.

Although high wave energy in the vicinity of offshore rocks and rocky headlands hinders the deployment and clean-up capabilities of response equipment, it is effective at breaking up oil and providing a continuous washing of oiled surfaces. Therefore, it may be appropriate not to respond to these sites. Response may be more feasible in the pocket coves that are prevalent among the rocky headlands of the North Coast, since they are often sheltered from the high wave energy.

Tidal Inlets (creeks and rivers)

The majority of North Coast tidal inlet sites currently have one or more response strategies. Because these tidal inlets undergo significant physical changes throughout the year (i.e. varying flow rates, location of mouth, gradient of inlet, sediments present, tidal cycles, etc.), the strategies provided may not be the best response to a particular incident. Therefore, the following general strategies have been provided to aid in developing an appropriate response for various types of conditions.

Many of the North Coast tidal inlets are small creeks that may easily be diked to prevent oil from entering on an incoming tide. This may be done manually or with heavy equipment (front-end loader or bulldozer) provided the site has both the proper type of sediment (fine to medium grained sand) and a sufficient amount to accomplish the task. Inlets with relatively steep gradients may not need to be diked, as long as the creek maintains flow to the sea (including on an incoming tide).

The rate of flow of the inlet must also be taken into consideration when diking. If the flow is too great to effectively dike the creek, through flow culverts placed within the base of the dike may allow an adequate amount of water to pass to keep the dike intact. These through flow culverts must be placed below the surface of the water to prevent oil from passing through the dike.

Many North Coast creeks and rivers naturally dike themselves during the summer months, creating a lagoon shoreward of the natural dike. Although this natural dike limits interaction with the sea, large waves or high tides often allow seawater to wash over the natural dike.

To prevent oil from entering the lagoon via large waves or high tides, a berm could be developed to heighten the highest portion of the natural dike. As with construction of sediment dikes, feasibility of the berm may depend on the type and amount of sediment available at the site. Furthermore, construction of such a system generally requires the use of large machinery (front-end loaders or bulldozers). Use of a berm may be dependent on the ability of heavy machinery to access the particular site.

There are a number of tidal inlets in the North Coast that are either too wide, too deep, or flow too rapidly to consider diking (even with through flow culverts). Effective use of boom and skimming systems must be used at these sites to prevent oiling. However, swift currents and entrainment of oil will often prevent exclusionary booming from being a practical solution. Instead, deflection boom should be placed to force the oil to a catchment site (fine to medium-grained sand beach is best) for recovery of the oil. Another option is placing the deflection boom along both sides of the inlet to deflect the oil to a skimmer located at the apex of the two lengths of boom. Again, this will be dependent on the resources available and the conditions present at the site at the given time.

Beaches

These sites are often accompanied by dynamic surf, which drastically reduces the effectiveness of existing response technology. As such, booming and skimming will generally not be feasible at these sites. Therefore, the use of a berm should be considered.

Prior to developing a berm, most beaches will need to be pre-cleaned in order to prevent oiling (and the subsequent need to dispose) vast amounts of beach debris (i.e. driftwood and kelp). On cobble beaches, though, pre-cleaning should be weighed against the effects of oil penetration. In some instances, kelp strewn along this type of beach could prevent oil from penetrating the surface, thereby reducing the severity of impact on the site.

The development of a berm generally requires the use of front-end loaders or bulldozers. Heavy equipment access to the site is key. In addition, the type and quantity of sediment available is very important. Fine to medium-grained sand is best for berm construction.

Oil collected along the base of the berm may be recovered using adsorbent materials.

9810.12 Sensitive Sites Summary Table

9810.12.1 Table Introduction & Explanation

The ACP has evolved from a planning document that was strictly focused upon the most probable protection strategies that were to be deployed during the initial 24 hours of an oil spill response into a more broad spectrum planning tool that attempts to encompass a much larger sphere of parameters that should all be considered during a more global preplanning exercise than was initially proposed.

The summary table on the following page is designed to condense the wealth of information that is contained in the various strategy pages of the ACP. The table gives the responder a summary document that can be used to quickly determine where response strategies have already been developed and what special parameters and issues (i.e. cultural, ecological, or economical), will need to be considered as a spill response effort is deployed in the field.

The North Coast Area Committee has categorized all of the ACP sites according to the relative ability and desirability of each site to be accessed with response equipment and the availability of that equipment for on scene deployment. Seven Categories for response were chosen, and they are defined in the following graph.

9810.12.2 Table Response Category Priorities By Number

1. Easily accessed site that is close to pre-staged response equipment.
2. Easily accessed site that is distant (20+ miles) from pre-staged response equipment.
3. Access is difficult, and pre-staged response equipment is close to the site.
4. Access is difficult, and pre-staged response equipment is distant (20+ miles) from the site.
5. Environmental damage could result from an intrusive response, and the land Trustee(s) recommends against an on site response.
6. Immediate response is probably not necessary, but this does not preclude a potential need to clean after impact evaluation.
7. Conventional response is not realistic based upon current technology. These are sites with either extreme currents, high energy shorelines, or on off shore rocks.

In addition to these mechanical response categories, the table indicates with either a “Y” (yes) or “N” (no) that a response strategy has been developed for the site, or if there are any known historical or cultural heritage issues, or critical fish habitat issues, or economic issues associated with these sensitive sites.

9810.12.3 Summary Table of the North Coast Sensitive Sites by response issue paramaters

SITE NUMBER	SITE NAME	RESPONSE CATEGORY	RESPONSE STRATEGY	HISTORICAL OR CULTURAL	CRITICAL FISH HABITAT	ECONOMIC
1-105-A	Off Shore Rocks Near Pyramid Point	6	N	Y	N	N
1-110-A	Smith River Mouth & Lagoon	2	Y	Y	Y	N
1-115-A	South Spit Smith River	6	N	Y	N	N
1-125-A	Lake Tolowa	6	Y	Y	Y	N
1-130-A	Southwest Seal Rock	7	N	N	N	N
1-135-A	Point Saint George	7	N	N	N	N
1-140-A	Castle Rock National Wildlife Refuge	5	N	N	N	N
1-145-A	Elk Creek & Crescent City Harbor	1	Y	N	Y	Y
1-150-A	Battery Point	7	N	N	N	N
1-155-A	Del Norte Coast Redwoods State Park	7	N	Y	N	N
1-160-B	Scat Beach	7	N	N	N	N
1-165-C	Last Chance Rock	7	N	N	N	N
1-170-A	Footsteps Rocks to Radar Station Rocks	7	N	Y	N	N
1-175-B	Wilson Creek	2	Y	Y	Y	N
1-180-B	Klamath River Mouth & Estuary	2	Y	Y	Y	Y
1-185-B	Flint Rock & White Rock	7	N	Y	Y	N
1-205-A	Gold Bluffs Beach	6	N	Y	N	N
1-210-A	Redding Rock	7	N	N	N	N
1-215-A	Redwood Creek	4	Y	N	N	N
1-220-A	Stone Lagoon	4	N	N	Y	N
1-230-A	Big Lagoon	4	N	Y	Y	N
1-235-A	Patricks Point to Trinidad Head	7	N	Y	Y	N
1-240-A	Trinidad Bay to McConnahas Mill Creek	2	N	Y	Y	Y
1-245-A	Little River Lagoon & Beach	1	Y	N	Y	N
1-250-A	Clam Beach	6	N	N	Y	N
1-255-A	Mad River Lagoon	3	Y	N	Y	N
1-260-A	Eel River Estuary	3	Y	Y	Y	N
1-265-A	Centerville Beach	6	N	N	N	N
1-268-A	False Cape Rock	7	N	N	N	N
1-273-A	Cape Mendocino	7	N	N	N	N
1-275-B	Steamboat Rock	7	N	Y	N	N
1-277-C	Capetown	7	N	N	N	N
1-279-B	Hair Seal Rock	7	N	N	N	N
1-285-A	Mattole River	2	Y	Y	Y	N
1-290-B	Cooksie Creek	4	N	N	Y	N
1-294-A	Shubrick Peak	7	N	N	N	N
1-298-B	Shelter Cove & Cormorant Hotel	4	N	N	N	Y
1-305-A	Humboldt Bay & Inner Samoa Peninsula	1	Y	N	Y	Y
1-310-A	North Humboldt Bay	1	Y	Y	Y	Y
1-320-A	Mad River Slough	1	Y	Y	N	N

SENSITIVE SITES BY RESPONSE ISSUE PARAMATERS

SITE NUMBER	SITE NAME	RESPONSE CATEGORY	RESPONSE STRATEGY	HISTORICAL OR CULTURAL	CRITICAL FISH HABITAT	ECONOMIC
1-324-A	Arcata Bay Sloughs	3	Y	Y	Y	N
1-326-A	Eureka Slough	3	Y	Y	Y	N
1-328-A	Woodley Island	2	Y	Y	N	Y
1-330-A	Indian Island	1	Y	Y	N	N
1-340-A	Palco Marsh	1	Y	N	N	N
1-345-A	Elk River Marshes	1	Y	N	Y	N
1-350-A	South Humboldt Bay	1	Y	Y	Y	N
1-352-A	White Slough & Salmon Creek	3	Y	Y	Y	N
1-360-A	South Spit	1	N	Y	N	N
1-400-C	Morgan Rock	7	N	N	N	N
1-402-B	Seal Rocks	7	N	N	N	N
1-404-A	Jackass Creek	5	N	N	N	N
1-406-B	Little Jackass Creek	5	N	N	N	N
1-408-A	Usal Creek	4	Y	Y	Y	N
1-410-A	Shoreline Rock	7	N	N	N	N
1-412-A	Soldier Frank Point	7	N	N	N	N
1-414-A	Rockport Bay & Cotteneva Creek	4	N	N	N	N
1-416-A	Hardy Creek	4	Y	N	N	N
1-430-A	Ten Mile River	2	Y	Y	Y	N
1-432-B	Inglenook Creek & Sandhill Lake	4	N	N	N	N
1-440-B	Pudding Creek	1	Y	Y	Y	N
1-442-A	Soldier Point	7	N	N	N	N
1-444-A	Noyo Harbor Entrance & Dolphin Cove	1	Y	N	Y	Y
1-448-B	South Fort Bragg	3	N	Y	Y	N
1-452-B	Casper Point	7	N	N	N	N
1-454-A	Casper Creek & Doyle Creek	1	Y	N	Y	N
1-456-A	Pt. Cabrillo to Russian Gulch	1	Y	N	Y	N
1-458-B	Mendocino Headlands State Park	7	N	N	N	N
1-460-A	Big River	1	Y	N	Y	N
1-462-B	Mendocino Bay	1	N	N	N	N
1-464-A	Van Damme State Park & Little River	1	Y	N	Y	N
1-466-B	Dark Gulch	3	Y	N	Y	N
1-468-A	Albion River	1	Y	N	Y	Y
1-470-A	Salmon Point & Big Salmon Creek	2	Y	N	Y	N
1-472-A	Navarro River State Park	2	Y	Y	Y	N
1-474-A	Greenwood Creek to Cuffey's Cove	4	Y	N	Y	N
1-476-B	Bonee Gulch	7	N	N	N	N
1-478-A	Elk Creek	4	Y	N	Y	N
1-480-C	Irish Gulch	2	Y	N	N	N
1-482-B	Alder Creek	2	Y	N	Y	N
1-484-A	Garcia River & Manchester State Beach	4	Y	N	Y	N
1-486-B	Point Arena	2	N	N	N	N

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